

### **In the Specification:**

Please amend the specification as shown:

Please delete the paragraph on page 6, lines 2-6, and replace it with the following paragraph:

Figure 1. (A) Secondary structure of the "8-17" DNAzyme system that consists of an enzyme strand (17E, **SEQ ID NO: 1**) and a substrate strand (17DS, **SEQ ID NO: 10**). (B) Cleavage of 17DS by 17E in the presence of Pb(II). (C) Schematics of DNAzyme-directed assembly of gold particles and their application as biosensors for metal ions such as Pb(II). **The oligonucleotide functionalized to the gold nanoparticle (DNA<sub>Au</sub>) is disclosed as SEQ ID NO: 11, while the 17DS substrate strand extended with nucleotides complimentary to the particles (Sub<sub>Au</sub>) is disclosed as SEQ ID NO:12.**

Please delete the paragraph on page 6, lines 7-9, and replace it with the following paragraph:

Figure 2. (A) The primary and the proposed secondary structure of the adenosine aptazyme built on the "8-17" DNAzyme platform. **The proposed secondary substrate is disclosed as SEQ ID NO: 13. The aptazyme sequence is disclosed as SEQ ID NOS 14 (left) and 15 (right).** (B) Schematic representation of the colorimetric detection of adenosine.

Please delete the paragraph on page 6, line 26, to page 7, line 1, and replace it with the following paragraph:

Figure 8. A new design of an aptazyme-based adenosine sensor (**SEQ ID NO: 16**). Reaction A: formation of blue aggregates in the absence of adenosine. Reaction B: the substrate is cleaved in the presence of adenosine. Reaction C: the cleaved substrate cannot assemble gold particles, yielding red-colored, separated particles.